

REMARKS

In response to the Office Action mailed January 5, 2009, Applicants respectfully request reconsideration. Claims 1-45 were previously pending in this application. By this amendment, Applicants are canceling claim 4 without prejudice or disclaimer. Claims 1, 3, 7, 29 and 41 have been amended. Claim 46 has been added. As a result, claims 1- 3 and 5-46 are pending for examination with claims 1, 29 and 41 being independent. No new matter has been added.

Summary of Telephone Conference with Examiner

Applicants' representative, Ed Walsh, thanks the Examiner for the courtesy in granting and conducting the telephone interview held on March 10, 2009. During the telephone interview, Applicants' representative discussed with the Examiner issues raised in the Office Action, the cited reference and the proposed claim amendments sent to the Examiner. No agreement was reached. The claim amendments and arguments presented herein may serve as a further summary of the telephone interview.

Rejections Under 35 U.S.C. § 112

The Office Action rejects claims 1, 29 and 41 under 35 U.S.C. § 112, first paragraph, for the use of the phrase "abstract location object." Without acceding to the propriety of these rejections, Applicants have herein amended claims 1 and 41 to remove the term "abstract." As a result, each of claims 1 and 41 recites a "location object," examples of which are discussed throughout the specification, for example, in connection with FIGs. 5A and 5B.

As for claim 29, Applicants respectfully submit that the claim does not recite any "abstract location object."

Accordingly, it is respectfully requested that the rejections of these claims under 35 U.S.C. § 112 be withdrawn.

Rejections Under 35 U.S.C. § 102

The Office Action rejects claims 1-12, 22, 29, 30 and 41 under 35 U.S.C. § 102(e) as purportedly being anticipated by Arora (U.S. Patent Publication No. 2004/0064568). Without acceding to the propriety of these rejections, Applicants have herein amended each of the

independent claims 1, 29 and 41 to clarify some of the claim terms. Claim 1 has been further amended to incorporate subject matter previously presented in claim 4. In view of these amendments, Applicants respectfully request reconsideration.

I. Overview of embodiments and cited reference

As an aid to the Examiner, before responding to the Office Action in detail, Applicant provides a brief overview of several exemplary embodiments of the invention.

The present application generally relates to a schema for location awareness of computer systems and computer devices. In one embodiment, a schema is provided for defining a location object for use by a location service (paragraphs 0006-0009). The location object may contain different types of location information regarding a common logical location, such as a street address, latitude, longitude and building/floor/room information, where each type of location information may be stored in a separate location element within the location object (paragraphs 0006 and 0008).

In a further embodiment, the plurality of location elements, representing respectively the different types of location information, may function as proxies for each other. For example, a location element may be associated with the wireless NIC of a user's computer and may store a MAC address and a signal strength of an access point to which the wireless NIC is connected (paragraph 0051). This information may allow a resolver component to infer the user's location (e.g., building/floor/room), because the wireless NIC must be within a certain proximity to be connected to the access point and to experience a certain signal strength (paragraph 0051).

As another example, the resolver component may receive a street address and use it to determine a position specified by latitude and longitude information (paragraphs 0006 and 0051). This may enable an application that understands only position to make use of address information when position information is not directed available (paragraph 0006).

By contrast, the Arora reference relates to a distributed index mechanism for indexing and searching for presence information in peer-to-peer networks, so that participating peers may query the distributed index to detect the presence of other participating peers registered in the distributed index (Arora: abstract). The distributed index can be implemented using XML documents, and the search queries can be formulated as XPath queries (Arora: paragraphs 0011, 0064 and 0078).

In Arora, a service denotes a set of functions that a provider peer offers to other peers in the network (Arora: paragraph 0252). The peers cooperate and communicate to publish, discover and invoke available services, such as membership, discovery, resolver, peer information and pipe services (Arora: paragraphs 0252 and 0256). For example, a provider peer publicizes a service by publishing a service advertisement, so that other peers can discover the service using the peer discovery protocol (Arora: paragraph 0252). To make use of a service (e.g., a pipe service), a peer sends a discovery request for a pipe advertisement and, after receiving the requested pipe advertisement, the peer sends a pipe resolver request for a provider peer matching the pipe identifier specified in the pipe advertisement (Arora: paragraph 0213). The peer then receives a peer advertisement for the provider peer, using which the peer contacts the provider peer to send data down the pipe (Arora: paragraph 0213).

It should be appreciated that the foregoing overview of embodiments is provided solely for the convenience of the Examiner. Each of the claims may not be limited in the manner described in the overview above. Therefore, the Examiner is requested not to rely upon the overview above for determining whether each of the claims distinguishes over the prior art of record, but to do so based solely upon the language of the claims themselves and the arguments presented below.

II. Claim 1

As amended, claim 1 recites, “the location elements each comprising location information of a different type regarding the logical location of the computing device, each location element configured to act as a proxy that is used to infer any other location element within the location object; receiving location information that is obtained based at least partially on sensed data from one or more hardware devices; and responding to a request from an application by populating a response with one or more first location elements inferred from information received via one or more second location elements acting as proxies for the first location elements.” These limitations are supported throughout the specification, for example, at FIG. 2 and paragraphs 0006, 0032, 0033, 0039 and 0051.

At page 3, the Office Action appears to assert that Arora discloses “location elements” in the abstract and paragraphs 0211, 0428, 0725 and 0265. In particular, the Office Action appears to

interpret the peers in Arora as “location elements.” Applicants respectfully disagree, because the peers in Arora do not meet all of the limitations recited in claim 1 relating to “location elements.”

As amended, claim 1 recites, “the location elements each comprising location information of a different type regarding the logical location of the computing device.” Nowhere does Arora disclose or suggest that the peers each comprise location information regarding the logical location of a single computing device, much less that the peers “each compris[e] location information of a different type,” as recited in claim 1. Arora has nothing to do with location information of different types. Instead, the distributed index allows the peers to look up each other when necessary, for example, when a peer wishes to invoke a service provided by another peer. This is done by assigning to each service (e.g., a pipe service) an identifier that is bound via a service advertisement to a peer identifier, which is in turn bound to an endpoint address via a peer advertisement and an endpoint advertisement (Arora: paragraph 0211). There is no mention that the peers “each compris[e] location information of a different type regarding the logical location of the computing device,” as recited in claim 1.

For at least this reason, claim 1 patentably distinguishes over Arora, and it is respectfully requested that the rejection of claim 1 be withdrawn.

As amended, claim 1 also recites, “each location element configured to act as a proxy that is used to infer any other location element within the location object,” and “responding to a request from an application by populating a response with one or more first location elements inferred from information received via one or more second location elements acting as proxies.”

At page 3, the Office Action appears to assert that Arora discloses the limitation, “each location element configured to act as a proxy for the first location elements,” because Arora discusses a proxy service at paragraph 0725. Applicants respectfully disagree.

The proxy service of Arora is used to enable network peers residing inside a firewall to communicate with network peers residing outside the firewall (Arora: paragraph 0725). As shown in FIG. 23 of Arora, the proxy service 270 is a special purpose node that forwards communications between network peers 200A-C residing outside the firewall 248 and network peers 200D-F residing inside the firewall 248. There is no mention that each network peer can act as a proxy, much less “a proxy that is used to infer any other location element within the location object,” as recited in claim 1.

For at least these additional reasons, claim 1 patentably distinguishes over Arora.

Claims 2, 3 and 5-28 depend from claim 1 and are allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

New claim 46 also depends from claim 1 and is allowable for at least the same reasons. Accordingly, allowance of claim 46 is respectfully requested.

III. Claim 29

As amended, claim 29 recites, "location elements that each comprise location information of a different type regarding a common logical location, each location element configured to act as a proxy that is used to infer other location elements in the schema." These limitations are supported throughout the specification, for example, at paragraphs 0006 and 0051.

For reasons that should be clear from the forgoing description of Arora, Arora fails to disclose or suggest these limitations. Accordingly, it is respectfully requested that the rejection of claim 29 be withdrawn.

Claims 30-40 depend from claim 29 and are allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

IV. Claim 41

As amended, claim 41 recites, "a location object with a plurality of location elements that each comprise location information of a different type regarding the logical location, each location element configured to act as a proxy that is used to infer other location elements within the location object." These limitations are supported throughout the specification, for example, at paragraphs 0006 and 0051.

For reasons that should be clear from the forgoing description of Arora, Arora fails to disclose or suggest these limitations. Accordingly, it is respectfully requested that the rejection of claim 41 be withdrawn.

Claims 42-45 depend from claim 29 and are allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

General Comments on Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the further distinguishing features of all of the dependent claims. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address in the future the further patentability of the dependent claims not specifically addressed herein.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70228US00.

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Respectfully submitted,

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